(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
11 November 2004 (11.11.2004)

PCT

(10) International Publication Number
WO 2004/096818 A3

(51) International Patent Classification[7]: C07F 9/40, 9/6561, G01N 33/04

(21) International Application Number: PCT/EP2003/012423

(22) International Filing Date: 6 November 2003 (06.11.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

PCT/US03/12901	25 April 2003 (25.04.2003)	US
PCT/US03/12943	25 April 2003 (25.04.2003)	US
PCT/US03/12926	25 April 2003 (25.04.2003)	US

(71) Applicant *(for all designated States except US)*: **GILEAD SCIENCES, INC.** [US/US]; 333 Lakeside Drive, Foster City, CA 94404 (US).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **BIRKUS, Gabriel** [SK/US]; 1266 Stanyan Street #4, San Francisco, CA 94117 (US). **CHEN, James, M.** [US/US]; 4015 Marblehead Drive, San Ramon, CA 94583 (US). **CHEN, Xiaowu** [US/US]; 377 Laurie Meadows Drive, Apt. 319, San Mateo, CA 94403 (US). **CIHLAR, Tomas** [CZ/US]; 727 Caravel Lane, Foster City, CA 94404 (US). **EISENBERG, Eugene, J.** [US/US]; 236 Club Drive, San Carlos, CA 94070 (US). **HATADA, Marcos** [US/US]; 2000 Walnut Avenue, Apt. G302, Fremont, CA 94538 (US). **HE, Gong-Xin** [CN/US]; 5436 Ontario Common, Fremont, CA 94555 (US). **KIM, Choung, U.** [US/US]; 1750 Elizabeth Street, San Carlos, CA 94070 (US). **LEE, William, A.** [US/US]; 749 Anderson Drive, Los Altos, CA 94024 (US). **MCDERMOTT, Martin, J.** [US/US]; 710 Bair Island Road, Suite 202, Redwood City, CA 94063 (US). **SWAMINATHAN, Sundaramoorthi** [IN/US]; 2858 Hillside Drive, Burlingame, CA 94010 (US).

(74) Agents: **RIEDL, Peter** et al.; Reitstötter, Kinzebach & Partner (GbR), Sternwartstrasse 4, 81679 München (DE).

(81) Designated States *(national)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States *(regional)*: ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:
— *with international search report*
— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

(88) Date of publication of the international search report: 7 April 2005

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: METHOD AND COMPOSITIONS FOR IDENTIFYING ANTI-HIV THERAPEUTIC COMPOUNDS

(57) Abstract: The invention relates to methods and compositions for identifying compounds having therapeutic activity against human immunodeficiency virus (HIV).

WO 2004/096818 A3

INTERNATIONAL SEARCH REPORT

International Application No
PCT/EP 03/12423

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 C07F9/40 C07F9/6561 G01N33/04

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 C07F C07H C12N C12Q

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
EPO-Internal, BIOSIS

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	HAMMOND, J. L. ET AL.: "Alkylglycerol Prodrugs of Phosphonoformate...." ANTIMICROBIAL AGENTS AND CHEMOTHERAPY, vol. 45, no. 6, June 2001 (2001-06), pages 1621-1628, XP002277443 page 1622; figure 1	1,7, 14-17, 19,20, 27,38, 42,43,62
X	HAKIMELAHI G H ET AL: "DESIGN, SYNTHESIS, AND STRUCTURE-ACTIVITY RELATIONSHIP OF NOVEL DINUCLEOTIDE ANALOGS AS AGENTS AGAINST HERPES AND HUMAN IMMUNODEFICIENCY VIRUSES" JOURNAL OF MEDICINAL CHEMISTRY, AMERICAN CHEMICAL SOCIETY. WASHINGTON, US, vol. 38, no. 23, 1995, pages 4648-4659, XP001145914 ISSN: 0022-2623 page 4648 - page 4652; table 4	1,7,8, 10, 12-15, 20,27, 38,39, 41,43, 62,67

-/--

[X] Further documents are listed in the continuation of box C.

[X] Patent family members are listed in annex.

° Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
11 January 2005	11 02. 2005

Name and mailing address of the ISA	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax (+31-70) 340-3016	Richter, H

INTERNATIONAL SEARCH REPORT

International Application No
PCT/EP 03/12423

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	KOFOED T ET AL: "REGIOISOMERS OF 2',3'-DIDEOXYNUCLEOSIDES RELATED TO 2-(PHOSPHONYLMETHOXY)ETHYL NUCLEOSIDES" BULLETIN DE LA SOCIETE CHIMIQUE DE FRANCE, SOCIETE FRANCAISE DE CHIMIE. PARIS, FR, vol. 134, 1997, pages 59-65, XP009004947 ISSN: 0037-8968 compounds 6a-6d, 7a-7e, 10a-10e, 11a-11e page 60, column 1, line 38 - page 61, column 2	1,7,10, 15,16, 20,27, 38,40, 43,62
X	KRAUS J-L: "NEW PHOSPHONATE ANALOGUES OF 3'-THIA-2',3'-DIDEOXYCYTIDINE (BCH-189) SYNTHESIS AND ANTI-HIV EVALUATION" NUCLEOSIDES & NUCLEOTIDES, DEKKER, NEW YORK,NY,, US, vol. 12, no. 2, 1993, pages 157-162, XP009004946 ISSN: 0732-8311 scheme 1 page 157, line 22 - page 158	1,7,20, 27,38
X	CHARVET ET AL: "Inhibition of Human Immunodefiency Virus Type 1 Replication by Phosphonoformate- and Phosphonoacetate-2',3'-Dideoxy-3'-thiacytidine Conjugates" JOURNAL OF MEDICINAL CHEMISTRY, AMERICAN CHEMICAL SOCIETY. WASHINGTON, US, vol. 14, no. 37, 1994, pages 2216-2223, XP002072425 ISSN: 0022-2623 schemes 1-3: compounds 3,4,5-10, 12,13, 17,18; "Biological Results" table 1	1,7,20, 38-40, 42,43,62
X	page 2219, column 2, paragraph 2	17,64,65
A	MENENDEZ-ARIAS L: "Targeting HIV: antiretroviral therapy and development of drug resistance" TRENDS IN PHARMACOLOGICAL SCIENCES, ELSEVIER, AMSTERDAM, NL, vol. 23, no. 8, 1 August 2002 (2002-08-01), pages 381-388, XP004386181 ISSN: 0165-6147 figure 1	1,7,8, 10, 12-15, 20,27, 38,39, 41,43, 62,67
X	WO 01/39724 A (UNIV CALIFORNIA SAN DIEGO ; KINI GANESH D (US); BEADLE JAMES R (US); H) 7 June 2001 (2001-06-07) page 3, line 4 - page 16, line 20; claims 1-6,13-15	1,7,8, 10,13, 20,27,38

-/--

INTERNATIONAL SEARCH REPORT

International Application No
PCT/EP 03/12423

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	BALLATORE, C. ET AL.: "Synthesis and Evaluation of Novel Amidate Prodrugs of PMEA and PMPA" BIOORGANIC AND MEDICINAL CHEMISTRY LETTERS, vol. 11, no. 8, 23 April 2001 (2001-04-23), pages 1053-1056, XP0001180825 page 1054, column 2 - page 1055, column 2; figures 1,3,4; table 1	1,7,8, 10,12, 13,20, 27,38, 41,43, 62,67
X	WO 01/96354 A (MARLIERE PHILIPPE ; POCHET SYLVIE (FR); CENTRE NAT RECH SCIENT (FR); P) 20 December 2001 (2001-12-20) page 1, line 26 - page 7, line 11; claims 26,27	1,7,15, 16
X	page 11, line 26 - page 12, line 4	17,20,27
X	page 12, line 5 - line 8; claims 21,28	38,40,43
A	CLERCQ DE E: "NEW DEVELOPMENTS IN ANTI-HIV CHEMOTHERAPY" CURRENT MEDICINAL CHEMISTRY, BENTHAM SCIENCE PUBLISHERS BV, BE, vol. 8, no. 13, November 2001 (2001-11), pages 1543-1572, XP009012547 ISSN: 0929-8673 the whole document	1
X	WO 02/08241 A (GILEAD SCIENCES INC ; BECKER MARK W (US); HE GONG XIN (US); LEE WILLIA) 31 January 2002 (2002-01-31) page 2 - page 16; claim 4; examples 1a,1b,2-7,9; table 7	1,7, 12-15, 17,20, 27, 38-41, 62, 67-70, 73,74, 76,78, 82,86
X	page 11; claims 1,4-6,8	71
X	page 10, line 20 - line 24	72
X	GORIN B I ET AL: "A Novel Esterification Procedure Applied to Synthesis of Biologically Active Esters of Foscarnet" TETRAHEDRON LETTERS, ELSEVIER SCIENCE PUBLISHERS, AMSTERDAM, NL, vol. 38, no. 16, 21 April 1997 (1997-04-21), pages 2791-2794, XP004058495 ISSN: 0040-4039 Scheme 1 page 2792; compound 1	38
A	page 2793	43

-/--

INTERNATIONAL SEARCH REPORT

International Application No
PCT/EP 03/12423

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 02/103008 A (GOUILAEV ALEX HAAHR ; NOERREGAARD-MADSEN MADS (DK); SLOEK FRANK ABILGA) 27 December 2002 (2002-12-27) pages 104, 266,316, page 308 - page 309; examples 4,15,25,26,31,32	38-41
X	page 13, paragraph 1	43
X	DATABASE MEDLINE 'Online! US NATIONAL LIBRARY OF MEDICINE (NLM), BETHESDA, MD, US; May 2002 (2002-05), POKROVSKII A G ET AL: "Comparative analysis of HIV-1 resistance to AZT and AZT H-phosphonate in a cell culture." XP002296489 Database accession no. NLM12134511 abstract & DOKLADY. BIOCHEMISTRY AND BIOPHYSICS. 2002 MAY-JUN, vol. 384, May 2002 (2002-05), pages 152-154, ISSN: 1607-6729 & DOKLADY AKADEMII NAUK, vol. 384, no. 2, May 2002 (2002-05), pages 259-262, ISSN: 0869-5652	1,18
A	DE CLERCQ E: "Chemotherapy of human immunodeficiency virus (HIV) infection: anti-HIV agents targeted at early stages in the virus replicative cycle" BIOMEDICINE AND PHARMACOTHERAPY, vol. 50, no. 5, 1996, pages 207-215, XP002296486 ISSN: 0753-3322 figure 13	2,5-7
T	US 2004/121316 A1 (CHEN XIAOWU ET AL) 24 June 2004 (2004-06-24) abstract	1,23,24, 38-44, 46-61
X	SAUBER K ET AL: "A new esterase for the cleavage of pivalic acid-containing prodrug esters of cephalosporins." ENZYME AND MICROBIAL TECHNOLOGY. JUL 1996, vol. 19, no. 1, July 1996 (1996-07), pages 15-19, XP002296487 ISSN: 0141-0229 page 15, column 1 - page 17, column 2; table 1	71

-/--

INTERNATIONAL SEARCH REPORT

International Application No
PCT/EP 03/12423

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	MENDES EDUARDA ET AL: "Synthesis, stability and in vitro dermal evaluation of aminocarbonyloxymethyl esters as prodrugs of carboxylic acid agents." BIOORGANIC & MEDICINAL CHEMISTRY. MAR 2002, vol. 10, no. 3, March 2002 (2002-03), pages 809-816, XP002296488 ISSN: 0968-0896 page 810 - page 815	71

INTERNATIONAL SEARCH REPORT

International application No.
PCT/EP 03/12423

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. [ ] Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. [X] Claims Nos.: 21,22,28, 29,30,45, 196-213, partially 1,8,13-17,20,23,27
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
see FURTHER INFORMATION sheet PCT/ISA/210

3. [ ] Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. [X] As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.

2. [ ] As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.

3. [ ] As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:

4. [ ] No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

[ ] The additional search fees were accompanied by the applicant's protest.

[X] No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 8,13-17,20,27;69 partly: 1,7,10,12,38-44,62-68,70

   Methods for identifying a compound and determining the anti-HIV activity of its phosphonate derivative. Means for the method.

---

2. claims: 3; partly: 1,19, 38-44

   Methods for identifying a compound and determining the anti-HIV activity and tissue selectivity of its phosphonate derivative or metabolite. Means for the method.

---

3. claims: 4; partly: 1,19, 38-44

   Methods for identifying a compound and determining the anti-HIV activity and intercellular residence time of its phosphonate derivative or metabolite. Means for the method.

---

4. claims: 6,36; partly: 2,5,7,10,11,12,25,26,31-34

   Methods comprising selecting a non-nucleotide compound containing at least one esterified carboxyl group and determining the intracellular persistence of the compound or a esterolytic metabolite of the esterified carboxyl thereof

---

5. claims: 35,37; partly: 2,5,7,9 -12,25,26,31-34

   Methods comprising selecting a non-nucleotide compound containing at least one esterified phosphonate group and determining the intracellular persistence of the compound or a esterolytic metabolite of the esterified phosphonate thereof

---

6. claims: 18; partly:1, 38-44

   Methods for identifying a compound and determining the anti-HIV activity and the resistance of HIV to the phosphonate derivative of the compound or metabolite thereof. Means for the method.

---

7. claims: 46-61; partly: 1,23,24,38, 40-44

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Methods for identifying a compound and determining the anti-HIV activity and susceptibility to hydrolysis of its carboxyl esters by GS-7340 Ester Hydrolase. Means for the method.

---

8. claims: partly: 38-44, 62-68,70

Method for identifying an ant -HIV compound and substituting it with an esterified carboxylate and assaying the product for its anti-HIV activity.

---

9. claims: 208,242,246; partly: 71-72, 210, 214, 218, 222, 234, 238-241, 243,244, 247-250

Prodrugs and method for identifying prodrugs involving the provision of a compound having an esterified phosphonate group and contacting the compound with an extract capable of catalysing the hydrolysis of a carboxylic ester.

---

10. claims: 245, 196; partly: 71-72, 210, 214, 218, 222, 234, 238-241,243, 244,-247-250

Prodrugs and method for identifying prodrugs involving the provision of a compound having an esterified carboxylate group and contacting the compound with an extract capable of catalysing the hydrolysis of a carboxylic ester.

---

11. claims: Partly 73-75,77-102

Prodrugs and method for identifying prodrugs involving the provision of a compound having an esterified phosphonate group and contacting the compound with an extract of peripheral blood having carboxylic ester hydrolase activity to produce a metabolite compoun

---

12. claims: 76, 200,204; Partly 73-75,77-102

Prodrugs and method for identifying prodrugs involving the provision of a compound having an esterified caboxylate group and contacting the compound with an extract of peripheral blood having carboxylic ester hydrolase activity to produce a metabolite compound.
76, 200,204
Partly 73-75,77-102,

---

13. claims: 103-134, 198, 201, 205, 206, 209,211, 212, 215, 216, 219, 220, 223, 224, 235, 236

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Prodrugs and method for identifying prodrugs having an esterified phosphonate group involving the provision of a compound having an esterified phosphonate group and contacting the compound with GS-7340 Ester Hydrolase

---

14. claims: 135-165, 199, 203, 207, 213, 217, 221, 225, 237

Prodrugs and method for identifying prodrugs having an esterified carboxyl group involving the provision of a compound having an esterified carboxyl group and contacting the compound with GS-7340 Ester Hydrolase.

---

15. claims: partly: 166-168, 170-195

Method for identifying prodrugs having an esterified phosphonate group involving the provision of a compound having an esterified phosphonate group and contacting the compound with an extract of peripheral blood mononuclear cells.

---

16. claims: 169, partly: 166-168, 170-195

Method for identifying prodrugs having an esterified carboxyl group involving the provision of a compound having an esterified carboxyl group and contacting the compound with an extract of peripheral blood mononuclear cells.

---

17. claims: partly 1,23,24,38-44

Methods for identifying a compound and determining the anti-HIV activity and susceptibility to hydrolysis of its phosphonate esters by GS-7340 Ester Hydrolase. Means for the method.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.2

Claims Nos.: 21,22,28, 29,30,45, 196-213, partially 1,8,13-17,20,23,27

Claims 23 and 28 cannot be searched because the backreference is not clear; Art 6, PCT. Present claims 1,8,13-17,20,27 relate to an extremely large number of possible methods. Support within the meaning of Article 6 PCT and/or disclosure within the meaning of Article 5 PCT is to be found, however, for only a very small proportion of the methods claimed. In the present case, the claims so lack support, and the application so lacks disclosure, that a meaningful search over the whole of the claimed scope is impossible. Consequently, the search has been carried out for those parts of the claims which relate to nucleoside derivatives and foscarnet derivatives.

At least one feature of claims 21,22,29,30,45 is directed to subject-matter of non-technical nature. Claims 29, 30, 45 inter alia include a method for doing business (Rule 39.1(iii) PCT)

Claims 196-213 cannot be searched because they belong to the group of "reach-through claims". Such claims lack clarity, support and sufficient disclosure according to the trilateral study project 3b- "Report on Comparative Study on Biotechnology Patent Practices".

The applicant's attention is drawn to the fact that claims relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure. If the application proceeds into the regional phase before the EPO, the applicant is reminded that a search may be carried out during examination before the EPO (see EPO Guideline C-VI, 8.5), should the problems which led to the Article 17(2) declaration be overcome.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No
PCT/EP 03/12423

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 0139724 A	07-06-2001	AU 1949701 A	12-06-2001
		BR 0016058 A	15-07-2003
		CA 2393410 A1	07-06-2001
		CN 1414854 T	30-04-2003
		EP 1233770 A2	28-08-2002
		JP 2004500352 T	08-01-2004
		WO 0139724 A2	07-06-2001
		US 2004019232 A1	29-01-2004
		US 2004127735 A1	01-07-2004
		ZA 200204194 A	20-08-2003
WO 0196354 A	20-12-2001	FR 2810322 A1	21-12-2001
		AU 6763801 A	24-12-2001
		CA 2411036 A1	20-12-2001
		EP 1290006 A1	12-03-2003
		WO 0196354 A1	20-12-2001
		JP 2004503559 T	05-02-2004
		US 2004023240 A1	05-02-2004
WO 0208241 A	31-01-2002	AU 8294101 A	05-02-2002
		BG 107572 A	28-11-2003
		BR 0112646 A	24-06-2003
		CA 2416757 A1	31-01-2002
		CN 1443189 T	17-09-2003
		CZ 20030413 A3	17-12-2003
		EE 200300029 A	15-10-2004
		EP 1301519 A2	16-04-2003
		HU 0301307 A2	29-09-2003
		JP 2004504402 T	12-02-2004
		NO 20030270 A	20-03-2003
		PL 360490 A1	06-09-2004
		WO 0208241 A2	31-01-2002
		US 2004018150 A1	29-01-2004
		US 2003219727 A1	27-11-2003
		US 2002119443 A1	29-08-2002
		ZA 200210271 A	28-10-2003
WO 02103008 A	27-12-2002	CA 2451524 A1	27-12-2002
		WO 02103008 A2	27-12-2002
		WO 02102820 A1	27-12-2002
		EP 1402024 A2	31-03-2004
		EP 1401850 A1	31-03-2004
		JP 2004535193 T	25-11-2004
		US 2003143561 A1	31-07-2003
		US 2004049008 A1	11-03-2004
		WO 03078625 A2	25-09-2003
		WO 03078445 A2	25-09-2003
		WO 03078626 A2	25-09-2003
		WO 03078050 A2	25-09-2003
		WO 03078446 A2	25-09-2003
		WO 03078627 A2	25-09-2003
		EP 1487978 A2	22-12-2004
		EP 1487848 A2	22-12-2004
		EP 1487849 A2	22-12-2004
		EP 1487850 A2	22-12-2004
		EP 1487851 A2	22-12-2004
		EP 1490384 A2	29-12-2004

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No
PCT/EP 03/12423

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2004121316 A1	24-06-2004	WO 03090690 A2	06-11-2003
		WO 03091264 A2	06-11-2003
		WO 03090691 A2	06-11-2003